

Chameleon Gecko (*Eurydactylodes spp.*)

Difficulty: Low

Chameleon geckos are a nocturnal, omnivorous, arboreal lizard native to New Caledonia, specifically the islands of Grande Terre, Iles Belep, and Ile Yandé. Although they are classified as “arboreal,” chameleon geckos tend to spend more time in the shrubs and vegetation of the shady forest understory rather than up in the canopy.

There are four species within the *Eurydactylodes* genus. Those marked with asterisks (*) are the most commonly available in the reptile industry:

- *Eurydactylodes agricolae**
- *Eurydactylodes occidentalis*
- *Eurydactylodes symmetricus*
- *Eurydactylodes vieillardi**

Chameleon geckos are among the smaller New Caledonian geckos, growing to 4-7" / 10-18cm total length, with males being significantly smaller than females. They have a slim triangular head, rounded snout, large lidless eyes, vertical pupils, small but strong feet with sticky toe pads, and a prehensile tail. Their most distinctive feature is their large, irregularly placed scales, which look something like oil droplets in water.

Coloring is generally some shade of olive or green with gray, green, yellow, or rust skin showing between the scales, although like many geckos, chameleon geckos can “fire up” their color to a bright tint or “fire down” to nearly black. Males tend to be more brightly colored than females, particularly during breeding season. To tell the difference between *E. agricolae* and *E. vieillardi*, look for a yellow crease from the mouth to the ear: if it reaches the ear, it's *E. agricolae*; if not, it's *E. vieillardi*.

Like other New Caledonian geckos, chameleon geckos are fairly easy to care for as far as reptiles go. When appropriate chameleon gecko care is provided, you may expect a lifespan of at least 10 years, likely more.

Chameleon Gecko Shopping List

These are products I personally recommend for setting up a functional lined day gecko terrarium. Some of the links in this care sheet are paid links — if you'd like to know why ReptiFiles uses paid links, visit [this page](#).

- Front-opening 18" x 18" x 24" terrarium, preferably larger
- 40w white incandescent heat bulb
- 5.5" ceramic socket dome heat lamp fixture
- Arcadia 7% ShadeDweller UVB Kit
- Power strip/surge protector with digital timer
- Digital probe thermometer + hygrometer device
- Handheld pressure sprayer
- Coconut fiber substrate, 11qt
- Environmental enrichment (live/artificial foliage, vines, branches, cork hollows, ledges, etc.)
- Crested gecko meal replacement powder
- Gecko feeding cups
- Magnetic gecko feeding ledge, small
- Feeding tongs
- Reptile calcium supplement powder (no D3)

- Insect gutload diet
- Water crystals
- Veterinary disinfectant

Chameleon Gecko Enclosure Size

Chameleon geckos need an enclosure that is large enough to give them adequate opportunity to explore, hunt, and generally exercise natural behaviors. They are also arboreal, which means that they need a terrarium that prioritizes climbing space (height). Considering that chameleon geckos can grow up to 7"/18cm long, **the minimum recommended enclosure size for a single chameleon gecko is 18" L x 18" W x 24" H / 45 x 45 x 60cm or similar.** Providing larger than the minimum is strongly recommended.

Can multiple chameleon geckos be housed in the same enclosure?

Chameleon geckos have been historically housed together successfully in breeding pairs or small breeding groups of one male and two females. However, if you don't intend to breed geckos, then there's no need to keep more than one in the enclosure. Up to three geckos can be housed in an 18" x 18" x 24" (45x45x60cm), although more space is strongly recommended.

Lighting & UVB for Chameleon Geckos

Chameleon geckos are nocturnal, which means that they are primarily active at night. This means that they are likely to prefer cooler temperatures, are exposed to low levels of indirect UVB during the day, and have exceptional night vision.

UVB Lighting

Chameleon geckos are capable of surviving without UVB lighting as long as they get a certain amount of dietary vitamin D3, but they can't thrive unless it is provided. UVB lighting can be tricky, because in order to get the right strength of UVB (measured by UV Index, or UVI), distance must be considered.

As a rough estimate, to provide appropriate UVB to a chameleon gecko, you will need one of the following lamps, installed above the terrarium mesh or within a lamp cage, placed at the recommended distance (measured from basking branch to lamp):

- Arcadia T5 SO 2.4% ShadeDweller-Arboreal UVB kit
 - above mesh: 4" / 10cm
 - below mesh: 4-6" / 10-15cm
- Arcadia T5 SO 7% ShadeDweller UVB kit
 - above mesh: 8-12" / 20-30cm
 - below mesh: 10-16" / 25-40cm

(These recommendations are approximations. It is strongly recommended to use a Solarmeter 6.5 to determine the best placement to achieve a UVI of 1.0-2.0 in the basking area at the top of the enclosure.)

Chameleon Gecko Temperature Requirements

Humans are *warm-blooded*, which means that our body temperature is automatically regulated. Chameleon geckos, however, are *cold-blooded*, and they need to move between areas of different temperatures in order to regulate their body temperature. These are the temperatures that chameleon geckos need to have available:

- **Basking area:** 82-85°F (27-29°C)
- **Cool zone:** 70-75°F (21-24°C)
- **Nighttime:** 68-74°F (20-23°C)

The best way to warm your gecko's enclosure is with a white heat bulb of appropriate wattage. A 40w white incandescent bulb such as the [Exo Terra Daytime Basking Spot](#) should do the trick, but results will vary based on your room temperature. If you notice that the basking area is too warm, switch to a lower wattage bulb. If your basking area is too cool, you will need a higher wattage bulb.

The basking area should be a vine or branch directly under the heat lamp. Because your chameleon gecko is arboreal and will be living in a tall enclosure, the warmest temperatures will be at the top (near the heat lamp), and the coolest temperatures will be toward the bottom. You will need vines, branches, and foliage at all levels to allow for proper thermoregulation.

To track basking temperature, use a digital probe thermometer, with the probe zip-tied to the basking surface under the heat source. Most reptile-brand digital probe thermometers function well.

Chameleon Gecko Humidity Requirements

Chameleon geckos do best in a high-humidity environment, with an **average humidity of 60-80%** as measured by a digital probe hygrometer with the probe placed in the middle of the enclosure. Humidity levels that are consistently too high or low can cause health problems for your gecko. However, it is natural for humidity to be lower in the warm area and higher in the cool area. It is also normal and healthy for humidity levels to rise at night and fall during the day, but they should never dip below 50%.

To raise the humidity in your gecko's enclosure (and provide an extra source of drinking water), use a pump-style pressure sprayer such as the [Exo Terra Mister](#) to wet down the enclosure every evening, and again in the morning if needed.

Chameleon Gecko Substrate Options

Because chameleon geckos are arboreal, they don't spend much time on the ground. Although it's not necessary to use bedding for them, it's very useful for aiding humidity. It also acts as a cushion if they fall from their perch, which does happen occasionally.

It's best to use a moisture-retentive substrate that is similar to the soil in a chameleon gecko's natural habitat. Here are some reliable options: DIY tropical mix (60% organic topsoil, 40% coconut fiber), [Zoo Med Reptisoil](#), [Zoo Med Eco Earth](#), [Exo Terra Plantation Soil](#), [The Bio Dude Terra Fauna bioactive kit](#)

For best results, add a generous layer of leaf litter on top.

Feces and urates should be removed daily, and contaminated substrate should be scooped out and replaced. Substrate should be completely replaced once every 3-4 months, depending on your needs.

Decorating Your Chameleon Gecko Terrarium

Decorations play a vital role in your gecko's enclosure as environmental enrichment. Enrichment items encourage exercise, stimulate your pet's natural instincts, and help promote overall wellbeing. And, of course, they make the enclosure look nicer! Without décor, your terrarium is just a glass box with dirt and a feeding ledge. Just because chahoua geckos can climb up glass doesn't mean they shouldn't have other climbing materials available. They also need places to hide that are not on the ground.

Branches, vines, magnetic ledges, cork hollows, and live or artificial foliage work well as décor in a chameleon gecko terrarium. Arrange these items in a way that encourages your gecko to climb and explore, and provides a variety of options for places to sleep during the day.

Feeding Your Chameleon Gecko

Chameleon geckos are *omnivores*, which means that they need a balanced diet of both plant- and animal-based foods to get the nutrition that they need. In the wild, they eat mostly fruit and insects. As pets, this diet can be re-created with a balance of 50% meal replacement powder and 50% live insects.

How often chameleon geckos need to eat depends on age:

- **Juveniles (0-12 months)** — insects every other day, CGD 2-3x/week
- **Adults (>12 months)** — insects 2-3x/week, CGD 2-3x/week

Crested gecko diet (CGD) must be offered via a wall-mounted feeding ledge, not placed on the ground.

Personally I prefer magnets to suction cups.

Best crested gecko diet powders: [Pangea](#), [Repashy](#), [Black Panther Zoological](#), [Leapin' Leachie](#), [Zoo Med](#), [Lugarti](#)

Best feeder insects for chameleon geckos: crickets, dubia roaches, discoid roaches, red head roaches, grasshoppers/locusts, hornworms, silkworms

The key to providing a healthy, balanced diet for your pet is VARIETY. Provide as varied of a diet as you possibly can, and you will be rewarded with a healthier pet that always looks forward to mealtime. I prefer to use a rotation of at least 3 different kinds/flavors of CGD for sensory enrichment.

Supplements

Crested gecko diet is already fortified and balanced with a variety of vitamins and minerals. However, feeder insects need to be “dusted” with a light coating of calcium powder to balance the calcium-phosphorus ratio.

There are many options, but [Arcadia CalciumPro Mg](#) or [Miner-All Outdoor](#) are both solid calcium supplements. For best results, use as directed by the label.

For optimum nutrition, feeder insects should be gutloaded for 2-3 days prior to feeding. I like to use a quality gutloading formula like [Arcadia InsectFuel](#) or [Repashy Superload](#) paired with hydrated water crystals for convenience.

Drinking Water

Although your gecko will get drinking water from daily mistings, it's best to always keep a bowl of clean water available on the feeding ledge. This bowl should be scrubbed out with veterinary disinfectant such as [Rescue](#) or [F1OSC](#) weekly for good hygiene.